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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,297	05/23/2000	Makoto Misaka	865.4477	3752

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

CHOI, WILLIAM C

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 11/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/576,297

Applicant(s)

MISAKA, MAKOTO

Examiner

William C. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 18-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-11,13,16 and 17 is/are rejected.
- 7) ☐ Claim(s) 2,7,12,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 & 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Claims 18-60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10.

Applicant's election with traverse of Group I (Claims 1-17) in Paper No. 10 is acknowledged. The traversal is on the ground(s) that it would not be an undue burden on the examiner to examine all of the pending claims. This is not found persuasive because applicant is claiming four distinct species of zoom lenses as set forth in the first office action. Specifically, the different species of zoom lenses claims different specific limitations regarding the number of lens groups as well as specific limitations directed to different lens elements for each species. Therefore, since no claim is generic as well as there being a need for a separate search for each of the species, an undue burden would be posed upon the examiner to examine all of the pending claims present in the application.

The requirement is still deemed proper and is therefore made FINAL.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

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Information Disclosure Statement

Receipt of the Information Disclosure Statements (IDS), with the copies of the references cited therein, were received on 5/23/2000 and 6/26/2002. Initialized copies of the IDS's are enclosed with this office action.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6, 10, 11, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura (U.S. 4,653,873).

In regards to claim 1, Kawamura discloses a zoom lens (column 1, lines 60-68, Figure 2) comprising, in order from an object side to an image side, a first lens unit of negative refractive power (Figure 2, "I"), a second lens unit of positive refractive power (Figure 2, "II"), a third lens unit of negative refractive power (Figure 2, "III"), and a fourth lens unit of positive refractive power (Figure 2, "IV"), wherein said first lens unit has a

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negative lens located on the most object side thereof (Figure 2, "L1"), and said negative lens located on the most object side of said first lens unit satisfies the claimed conditions (column 5, Table "First Embodiment").

Regarding claim 4, Kawamura discloses wherein during variation of magnification from a wide-angle end to a telephoto end, said first lens unit moves with a locus convex toward the image side (Figure 1, "I"), said second lens unit moves toward the object side in such a way as to decrease a separation between said first lens unit and said second lens unit (Figure 1, "II"), said third lens unit moves toward the object side in such a way as to increase a separation between said second lens unit and said third lens unit (Figure 1, "III"), and said fourth lens unit moves toward the object side in such a way as to decrease a separation between said third lens unit and said fourth lens unit (Figure 1, "IV").

Regarding claim 5, Kawamura discloses wherein said zoom lens satisfies the claimed condition (column 5, Table "First Embodiment").

Regarding claim 6, Kawamura discloses wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side (Figure 2, "L1"), a negative lens (Figure 2, "L3"), and a positive lens of meniscus form having a convex surface facing the object side (Figure 2, "L5").

Regarding claim 10, Kawamura discloses wherein said second lens unit comprises two positive lenses (Figure 2, "L6" & "L8") and one negative lens (Figure 2, "L7").

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Regarding claim 11, Kawamura discloses wherein said third lens unit comprises a cemented lens composed of a negative and a positive lens (Figure 2, "L10" & "L11").

Regarding claim 13, Kawamura discloses wherein said second lens unit comprises one positive lens and a positive cemented lens composed of a negative and a positive lens (Figure 2, "L7" & "L8").

Regarding claim 16, Kawamura discloses an image pickup apparatus (i.e. camera) comprising said zoom lens (column 1, lines 9-11) that will inherently further comprise a photosensitive member (i.e. film) and a means for supporting said zoom lens and said photosensitive member (i.e. camera body), this being reasonably assumed from it being well known in the art for cameras to comprise a photosensitive member (i.e. film) and a means for supporting said zoom lens and said photosensitive member (i.e. camera body).

Claims 1, 3, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sensui (U.S. 5,748,384).

In regards to claim 1, Sensui discloses a zoom lens (column 4, lines 40-48, Figure 1) comprising, in order from an object side to an image side, a first lens unit of negative refractive power (Figure 1, "G1"), a second lens unit of positive refractive power (Figure 1, "G2"), a third lens unit of negative refractive power (Figure 1, "G3"), and a fourth lens unit of positive refractive power (Figure 1, "G4"), wherein said first lens unit has a negative lens located on the most object side thereof (Figure 1, "d1"), and said negative lens located on the most object side of said first lens unit satisfies the claimed conditions (column 6, Table 1).

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Regarding claim 3, Sensui discloses wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power (column 3, lines 63-65, Figure 3, "G2") and a lens group on the image side composed of at least one lens unit having a negative refractive power (Figure 3, "G3").

Regarding claim 8, Sensui discloses wherein said zoom lens satisfies the claimed conditions (column 6, Table 1).

Regarding claim 9, Sensui discloses wherein said zoom lens satisfies the claimed conditions (column 6, Table 1).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Narimatsu (U.S. 6,075,653).

In regards to claim 1, Narimatsu discloses a zoom lens (column 2, lines 40-48, Figure 1) comprising, in order from an object side to an image side, a first lens unit of negative refractive power (Figure 1, "G1"), a second lens unit of positive refractive power (Figure 1, "G2"), a third lens unit of negative refractive power (Figure 1, "G3"),

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and a fourth lens unit of positive refractive power (Figure 1, "G4"), wherein said first lens unit has a negative lens located on the most object side thereof (Figure 1, "L11"), and said negative lens located on the most object side of said first lens unit satisfies the claimed conditions (column 7, Table "Lens Data").

Regarding claim 17, Narimatsu discloses an image projection apparatus comprising said zoom lens having a light source, an image forming element and arranged to project an image (column 1, lines 6-10).

Allowable Subject Matter

Claims 2, 7, 12, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in independent claim 2: a zoom lens as claimed, specifically further wherein said first lens unit has a second negative lens other than said negative lens located on the most object side thereof satisfying the claimed conditions.

The prior art fails to teach a combination of all the claimed features as presented in independent claim 7: a zoom lens as claimed specifically further wherein said second lens unit and said fourth lens unit move in unison with each other during variation of magnification.

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The prior art fails to teach a combination of all the claimed features as presented in independent claim 12: a zoom lens as claimed specifically further wherein said fourth lens unit comprises a negative lens and a positive lens, and has at least one aspheric surface.

The prior art fails to teach a combination of all the claimed features as presented in independent claim 14: a zoom lens as claimed specifically further wherein said fourth lens unit has a plastic aspheric lens.

The prior art fails to teach a combination of all the claimed features as presented in independent claim 15: a zoom lens as claimed specifically further wherein said fourth lens unit comprises a negative and a positive lens and has a plastic aspheric lens.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okada et al (5,963,377), Yamamoto (U.S. 5,805,350) and Shibayama (U.S. 5,793,531) are being cited herein to show zoom lenses comprising the structural limitations of claim 1 as well as embodying some of the limitations of the dependent claims. However, additional rejections would have been repetitive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

W.C

William Choi
Patent Examiner
Art Unit 2873
October 31, 2002


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800